

B.) AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings of claims in the Application.

1. –14. (Canceled)

15. (Original) A method for selecting a reduced-cost nickel-base superalloy, the method comprising the steps of

identifying a baseline nickel-base superalloy having a nominal composition, in weight percent, comprising
a baseline tantalum content of more than about 5 weight percent tantalum, and
a baseline sum (hafnium content plus columbium content plus titanium content plus tungsten content), in weight percent,

selecting a modified nickel-base superalloy having a nominal composition, in weight percent, comprising

a modified tantalum content at least 1.5 weight percent less than the baseline tantalum content, and

a modified baseline sum of (modified hafnium content plus modified columbium content plus modified titanium content plus modified tungsten content) at least 1.5 weight percent greater than the baseline sum.

16. (Original) The method of claim 15, wherein the step of selecting includes the step of selecting an absolute value of (the modified baseline sum minus the baseline sum) to be at least as great as the absolute value of (the modified tantalum content minus the baseline tantalum content).

17. (Original) The method of claim 15, wherein the step of selecting includes the step of selecting the modified nickel-base superalloy to have a nonzero modified hafnium content, a nonzero modified columbium content, a nonzero modified titanium content, and a nonzero modified tungsten content.

18. (Original) The method of claim 15, wherein the sum of the modified tungsten content plus a modified molybdenum content in the modified nickel-base superalloy is at least about 6.5 weight percent.

19. (Original) A method for selecting a reduced-cost nickel-base superalloy, the method comprising the steps of

identifying a baseline nickel-base superalloy having a nominal composition, in weight percent, comprising

a baseline tantalum content of more than about 5 weight percent tantalum, and

a baseline sum (baseline hafnium content plus baseline columbium content plus baseline titanium content plus baseline tungsten content), in weight percent,

selecting a modified nickel-base superalloy having a nominal composition, in weight percent, comprising

a modified tantalum content at least 1.5 weight percent less than the baseline tantalum content, and

a modified baseline sum of (modified hafnium content plus modified columbium content plus modified titanium content plus modified tungsten content) at least 1.5 weight percent greater than the baseline sum, wherein

an absolute value of (the modified baseline sum minus the baseline sum) is at least as great as the absolute value of (the modified tantalum content minus the baseline tantalum content),

wherein the modified nickel-base superalloy has a nonzero modified hafnium content, a nonzero modified columbium content, a nonzero modified titanium content, and a nonzero modified tungsten content, and

wherein the sum of the modified tungsten content plus a modified molybdenum content in the modified nickel-base superalloy is at least about 6.5 weight percent.